Return Address

MACKENZIE LABORATORIES, INC.
1163 Nicole Court
Glendora, CA 91740 USA

OTHER MACKENZIE PRODUCT LINES

Digital Message Repeaters - Mackenzie's line of Digital Message repeaters are the ideal audio announcement solutions for Public Address, Amusement, Entertainment, Museum and Exhibit applications. Self contained solid state systems offer unparalleled reliability. A variety of channel, connection, bandwidth and memory configurations are available.

Controls and Peripherals - Many applications require additional equipment to optimize the performance of Mackenzie products. This area focuses on items developed or sourced for their compatibility, ease of use and value. Included are, input/output controllers, speakers, amplifiers, motion sensors and pushbuttons among others.

Transit - Mackenzie is making a difference in transit applications with innovative solutions for ADA compliance and Passenger Information Systems. These products address a variety of audio and text messaging requirements and support both in-vehicle and wayside installations.

Overhead Page Management - Mackenzie's OPM and FE series of Digital Page Stacker/Repeater and Feedback Eliminators offer advanced features for the most difficult paging and intercom applications. A unique design makes feedback virtually impossible by recording then repeating pages which opens the loop between the input microphone and speakers. Various models are available to support simple repetition, multiple page stacking and multiple input channels.

muzak

www.muzak.com

DVCD-MZ8

Compact Disc Autoload, Voice-On-Hold System

User's Manual

Version 1.0 Revised 9/21/2006
Doc 99-20-185 - $25.00

General Safety Instructions

Always follow these basic safety precautions when using the system:

1. Read carefully and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. DO NOT block or cover ventilation slots and openings.
4. DO NOT place the product in a closed enclosure or cabinet unless proper ventilation is provided.
5. Never spill liquid on the product or drop objects into the ventilation slots and openings. Doing so may result in serious damage to the components.
6. Repair or service must be performed by a factory authorized repair facility.
7. DO NOT staple or otherwise attach the power supply cord to building surface.
8. DO NOT use the product near or in wet or damp places, such as wet basements.
9. DO NOT use extension cord. Install within 6 feet of a grounded outlet receptacle.
10. DO NOT install during lightning storm.
11. Never touch un-insulated wires or terminals unless the unit is disconnected from both power and the rest of the phone system.
12. Use Caution when installing or modifying configuration switches or control lines.
13. Install in a protected location where no one can step on, or trip over, power and line cords.
14. The unit must be securely attached to a wall board, rack or table mounted.
15. Use correct power source. Use only the power pack supplied.

⚠ CAUTION: If any wiring from the system leaves the premises, you must use proper electrical protectors.

Regulations:

This product contains a Class 1 Laser Product which complies with 21CFR, Subchapter J, Parts 1040.10 and 1040.11. This product contains no user servicable parts or adjustments. Do not open or disassemble product.

CAUTION - use of controls or adjustments or performance of procedures other than those herein may result in hazardous radiation exposure.

FCC (Part 15) Radio Frequency Interference - The DVCD-MZ8 generates and uses radio frequency energy and if not installed and used in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. Unit complies with the limits for Class A devices in accordance with the specifications in Subpart J of Part 15 of the FCC Rules. This testing is designed to provide reasonable protection against such interference. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the unit off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient the radio or TV receiving antenna.
-Relocate the unit with respect to the radio or TV receiver or vice-versa.
-Plug the unit into a different outlet so that it and the radio or TV receiver are on different branch circuits
-If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Warranty & Registration Card for the
DVCD-MZ8 – Compact Disc Autoload Voice-On-Hold System

Date:_____ Serial No.: _____

Purchaser: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Seller: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Return warranty card via:

FAX: (909) 394-9411
MAIL: Address on reverse side
ONLINE: www.macklabs.com/registration.html

NOTES

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NOTES

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Shipping Container Contents

The following items should be found in the container of the DVCD-MZ8.

- DVCD-MZ8 System
- Wall mount power pack
- Audio cable
- Mounting hardware
- User's manual
- Screwdriver
- Courtesy CD

Models:

Model #	Capacity	Bandwidth
DVCD-MZ8	8 minutes	6.8kHz

1. OVERVIEW

1.1 Features and Benefits:

The DVCD-MZ8 is a highly reliable audio playback system specifically designed for On-Hold applications. Production is loaded into the system by Compact Disc and stored in non-volatile FLASH memory. Voice messaging plays continuously from memory until new content is loaded.

The DVCD-MZ8 incorporates a security feature to prevent loading of unauthorized music and/or advertising. A special key allows only material produced by Muzak VOICE to be used with the system.

The DVCD-MZ8 is designed to interface with the Music-Hold port of a wide variety of phone systems. This allows your messages to be played to customers while they are on hold, reducing hang ups and increasing sales.

The DVCD-MZ8 incorporates a ruggedized, electronically controlled Compact Disc mechanism originally designed for automotive applications and providing years of reliable service. Messages are digitized and stored in non-volatile FLASH memory that protects them from loss during power outage.

Multiple audio outputs(600ohm,8ohm) with level control and high quality sampling allow the sound of the DVCD-MZ8 to be optimized for almost any phone system, insuring that the message gets heard.

1.2 General Specifications:

Power:
12VDC, power pack included

Audio Fidelity
100Hz - 6.8kHz
60dB Signal to Noise

Audio Outputs:
RCA, mono, 600 ohm
RCA, mono, 2.5W @ 8ohm
Monitor speaker

Manual Controls:
Output Level, Eject, Speaker Enable

LED Indicators:
CD Ejected, Recording, MOH playing(audio)

Package:
6.15" W x 8.65" D x 2.63" H
3 position wall mount
Painted steel chassis

7. WARRANTY, SERVICE & RETURNS

The industrial grade housing and quality construction of the Mackenzie DVCD-MZ8 virtually eliminates the need for service or maintenance. There are no user-serviceable components within the Mackenzie DVCD-MZ8. Refer all servicing to the factory.

7.1 Warranty Coverage:

The Mackenzie DVCD-MZ8 is tested and checked before shipment and are guaranteed against defective material or workmanship for a period of three (3) year from the date of purchase. Should trouble ever develop, contact the Factory directly by telephone or in writing. If it is determined that the equipment requires Factory service, return it to the Factory. If our inspection shows that the trouble was caused by defective material or workmanship, we will repair or replace the equipment without charge and return prepaid. Repairs made necessary by abuse, improper use, unauthorized service or maintenance, and/or improper installation, as well as out of warranty repairs, will be charged at our regular repair prices in effect at the time. The obligation under this warranty shall be limited to the replacement, repair or refund of any such defective device within the warranty period.

This warranty is in lieu of and excludes all other warranties, expressed or implied, and in no event shall MACKENZIE be responsible for damage to other equipment or property, for any anticipated profits, consequential damages, loss of item, or other operation or use of this product, and MACKENZIE'S maximum liability shall not ever be greater than the price paid for the equipment. This warranty gives you specific legal right. Your rights may vary from state to state. Inquiries regarding use, repair and service should be made to:

MACKENZIE LABORATORIES, INC.
1163 Nicole Court, Glendora, CA 91740 USA
Telephone: (909) 394-9007
FAX No: (909) 394-9411
Email: info@macklabs.com
WWW: www.macklabs.com

7.2 What we ask you to do:

To get warranty service for your DVCD-MZ8 system, you must provide proof of the date of original purchase. In the event you need to ship your DVCD-MZ8 system to the factory for service, call us for a return authorization number. When you ship your DVCD-MZ8 system, you must prepay all shipping cost. We suggest that you retain your original packing material in the event that you need to ship your DVCD-MZ8 system. When sending your DVCD-MZ8 system to the factory, include your name, address, phone number, proof of date of purchase, and a description of the operating problem. After repairing or replacing your DVCD-MZ8 system, we will ship it to your return address at no cost to you within the USA. Repair or replacement of your DVCD-MZ8 system at our factory is your exclusive remedy.

7.3 What this warranty does not cover:

This warranty does not cover defects resulting from accidents, damage while in transit to factory, alterations, unauthorized repairs, failure to follow instructions, misuse, fire, flood, and acts of God.

6. Troubleshooting guide

Before contacting the factory, please review the following answers to some common problems.

No LEDs are active on the DVCD-MZ8.

- Verify that the AC-DC power adapter is plugged into non-switched AC power outlet.
- Verify that the power connector is plugged completely into the jack on the DVCD-MZ8.

The system will not mechanically load the compact disc.

- Push the compact disc completely into the DVCD-MZ8.
- Verify that the AC-DC power adapter is plugged into non-switched AC power outlet.
- Verify that the power connector is plugged completely into the jack on the DVCD-MZ8.

The Record LED never comes on after the compact disc is loaded into the system

- Verify the compact disc is formatted for Muzak Voice production.
- Verify that the compact disc is inserted with the data side down.
- If the compact disc is blank, the Record LED will never come on.
- Verify that the nominal level of the Audio recorded on the compact disc is over –20dB.

After recording, the compact disc ejected, and the system is not playing a message.

- Pressing, and holding the eject button while recording will eject the compact disc immediately and delete the recorded audio.
- Verify that the compact disc is inserted with the data side down.

Can't hear anything from the audio output

- If both REC and AUDIO LEDs are off, there is no audio being output by the system.
- Verify that the RCA to RCA connector is securely attached to the DVCD-MZ8 and the phone system.
- Turn the output level adjustment clockwise to increase the Audio output level.
- Use the 8 ohm output instead of the line level output.

Can't hear anything through the monitor speaker

- If both REC and AUDIO LEDs are off, there are no recorded messages on the system.
- Press the Speaker button so that it locks in the depressed position.
- If the audio output is adjusted low, the level from the monitor speaker will also be low.

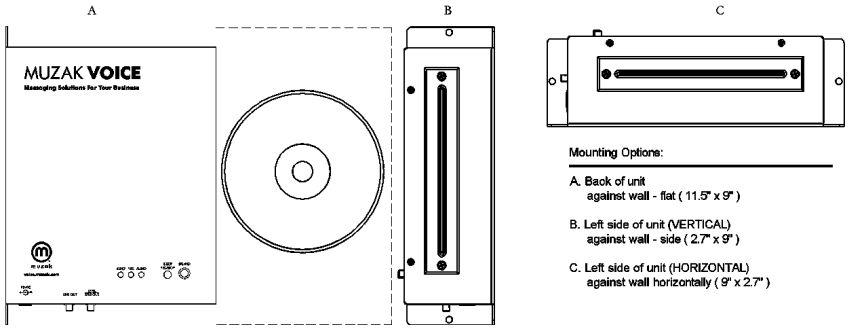
2. Installation:

This section provides complete instructions for mounting the DVCD-MZ8. Before you install the DVCD-MZ8 system, make sure you have:

-A music on hold input on your phone system.
-A non-switchable 110VAC electrical outlet near the location where the unit is to be installed.

2.1 Wall or Table Installation:

1. Locate a proper space on the telephone equipment board or wall. You can mount the DVCD-MZ8 unit in one of three positions: flat, side, or horizontal.
2. Position the unit on the board; mark the mounting hole locations.
3. Using the mounting screws provided, secure the DVCD-MZ8 system to the board or wall.
4. If table top mounting the DVCD-MZ8, stick the enclosed rubber feet on the bottom of the unit.

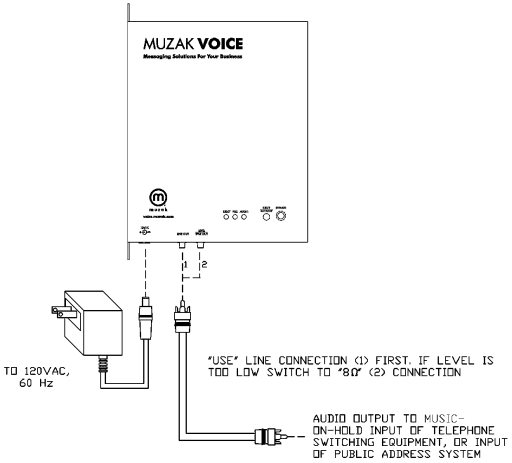

A
B
C
MUZAK VOICE
Mounting Options:
A. Back of unit
against wall - flat (11.5" x 9")
B. Left side of unit (VERTICAL)
against wall - side (2.7" x 9")
C. Left side of unit (HORIZONTAL)
against wall horizontally (9" x 2.7")

2.2 Connecting the power pack

1. Plug the power pack into a 110VAC power outlet which is not connected to a switch.
2. Plug the power plug into the DVCD-MZ8 system's power jack marked POWER.
3. There is no power switch on the DVCD-MZ8 system, so as soon as power is connected, the system will be active.

2.3 Connection to Telephone equipment

1. Connect one side of the supplied RCA cable to the telephone equipment's Music-On-Hold input. Connect the other side of this cable to the DVCD-MZ8's LINE OUT. There are two audio outputs on the DVCD-MZ8, LINE OUT (Low, +4dB into 600 ohms), and SPKR OUT (High, 1W into 8 ohms). Use the LINE OUT first adjusting the audio output volume potentiometer to obtain the correct audio level. If this does not provide enough audio level, then switch to the SPKR OUT.


MUZAK VOICE
TO 120VAC, 60 Hz
"USE" LINE CONNECTION (1) FIRST. IF LEVEL IS TOO LOW SWITCH TO "8Ω" (2) CONNECTION
AUDIO OUTPUT TO MUSIC-ON-HOLD INPUT OF TELEPHONE SWITCHING EQUIPMENT, OR INPUT OF PUBLIC ADDRESS SYSTEM

3. Operation:

3.1 Message Downloading:

When you receive the new DVCD-MZ8 system, a courtesy Voice-On-Hold program will be loaded into its memory. To load new messages, simply insert a properly formatted Compact Disc into the DVCD-MZ8 unit. Make sure to insert the CD with the data side down.

The DVCD-MZ8 incorporates a security feature to prevent loading of unauthorized music and/or advertising. A special key allows only material produced by Muzak VOICE to be used with the system.

When a new Compact Disc is inserted, the DVCD-MZ8 will automatically verify the disc. During this process, the Record LED will blink for approximately 9 seconds. If the disc is not valid, it will be ejected and the DVCD-MZ8 will play the existing program in memory. If the disc is valid the DVCD-MZ8 will record the audio program, ignoring the silence before and after the audio program on the CD. While recording, the red Record LED will light. At the end of the audio program, when the DVCD-MZ8 detects 6 seconds of silence, the Record LED will go out and the DVCD-MZ8 will play the program from memory.

3.5 Audio adjustments

There is one potentiometer on the DVCD-MZ8 system allowing the user to tailor the audio output level. This potentiometer is located on the front side of the device directly above the 8ohm output connector.

Audio level

The level of the 600 and 8 ohm Audio outputs as well as the monitor speaker are simultaneously adjusted using the Audio level adjustment pot. Turning this potentiometer counter clockwise will lower the Audio level. Turning this potentiometer clockwise will raise the Audio level.

3.6 Connections

12VDC, 2.5mm Barrel connector

The system is powered by 12VDC. Use only the AC-DC power adapter supplied by the manufacturer to guarantee proper operation.

LINE OUT, RCA connector

A 600 ohm, transformer isolated, Audio output. When installing the DVCD-MZ8 system, connect this output to the phone system first.

SPKR OUT, RCA connector

An amplified, 1 watt into 8 ohm, Audio output. Use this Audio output if the Audio from the Line output can't drive the on-hold circuit to a high enough level.

4. Compact Disc Formatting:

The DVCD-MZ8 incorporates a security feature to prevent loading of unauthorized music and/or advertising. A special key allows only material produced by Muzak VOICE to be used with the system.

5. Power failure recovery

The DVCD-MZ8 uses FLASH memory which is not dependent upon power or battery backup to retain its memory. This eliminates problems associated with brown outs or unexpected power losses. When power is returned, the system will immediately start the operation it was in prior to power being removed.

Speaker pushbutton – Black, locking

A monitor speaker, on the front side of the unit, allows the local user to hear the Audio being output by the DVCD-MZ8. Pressing this button will activate the monitor speaker. Releasing the button will deactivate the monitor speaker.

The volume of the monitor speaker is determined by the volume setting of the Audio output. If the phone system requires a particularly low level from the DVCD-MZ8, the volume of the monitor speaker will also be low.

Note: Do not adjust the Audio output level adjustment in order to hear the monitor speaker level better. Doing this will adjust the level of the Audio output which may not be acceptable.

3.4 LED (Light Emitting Diodes) descriptions

Three LED's are provided on the top of the DVCD-MZ8 unit to display the current status of the system.

EJECT LED, Yellow

This LED will light whenever the CD is ejected, i.e. no CD in the system. When a CD is inserted, and loaded, i.e. CD is completely inside the machine, this LED will go out.

REC LED, Red

The Record LED will blink one time when the DVCD-MZ8 is powered on, indicating that the memory operational.

The Record LED will blink for approximately 9 seconds while verifying a new audio program disc.

This LED will light when the DVCD-MZ8 starts recording an audio program, and will go out when the recording process stops.

AUDIO LED, Green

This LED will light whenever the DVCD-MZ8 is playing a recorded message

The audio being recorded will be output through the LINE and SPKR outputs during the recording process. This audio may also be monitored by the user by pressing the Speaker button.

WARNING: When a CD is inserted into the DVCD-MZ8, the previous recording is deleted immediately. If the CD is then ejected, prior to recording any audio, the DVCD-MZ8's memory will be empty.

3.2 Voice playback

After a message has been recorded into memory, the DVCD-MZ8 will automatically begin playing them through the audio outputs. There is no control, or user input, required to initiate the playback. The green, Audio LED will light whenever the system is playing messages.

3.3 Pushbutton descriptions

Two pushbuttons are provided on the DVCD-MZ8 system.

Eject / Rec Stop pushbutton – Red, momentary

Allows the user to stop the recording process and/or eject the CD as follows:

-When the system is not recording, the button functions as an Eject button.
-When the DVCD-MZ8 is recording audio, (whenever the Record LED is on) pressing this button momentarily will stop the recording and save the Audio which was just recorded. The system will not eject the CD.
-If this button is pressed and held for two seconds while the DVCD-MZ8 is recording, the message just recorded will be deleted, and the CD will be ejected .
-If the button is pressed momentarily while the DVCD-MZ8 is recording audio, and then pressed momentarily again, the system will stop the recording process, save the Audio just recorded, and eject the CD.

Model DVCD-MZ8
COMPACT DISC AUTOLOAD VOICE-ON-HOLD SYSTEM

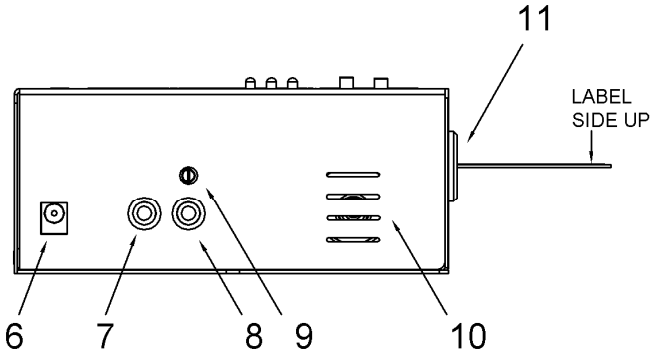
1 **EJECT LED:**
Yellow light ON indicates there is no compact disc inserted. Yellow light OFF indicates the compact disc is in place.

2 **RECORD LED:**
The Record LED will blink one time when the DVCD-MZ8 is powered on, indicating that the memory is operational. The Record LED will blink for up to 30 seconds while verifying a new audio program disc. This LED will light when the DVCD-MZ8 starts recording an audio program, and will go out when the recording process stops.

3 **AUDIO LED:**
This green LED is ON when the system is playing a message from memory.

4 **EJECT / RECORD STOP PUSHBUTTON:**
This ejects the CD when the system is playing a message. If pressed during the recording process the recording will be stopped.

5 **SPEAKER PUSHBUTTON:**
Turns local Monitor ON/OFF.



6 **POWER:**
Insert supplied power adapter.

7 **AUDIO OUTPUT (LINE):**
Audio output level of up to +4dB into 600 Ω, this is a standard level for most applications.

8 **AUDIO OUTPUT (POWER):**
Audio output level of up to 2.5W into 8 ohm. Use this output if more drive is needed to reach a more comfortable listening level.

9 **AUDIO OUTPUT ADJUSTMENT:**
Adjusts the volume to the line level and power audio outputs.

10 **MONITOR SPEAKER:**
Allows user to preview message recording and play back.

11 **CD ENTRY:**
Insert CD in slot with label side up

DVCD-MZ8 Quikey
V 1.0 August 22, 2006